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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

June 22, 2005

Reply to
Attn Of: OEA-095

MEMORANDUM

SUBJECT: Review of Work Plan: Remedial Investigation/Feasibility Study at the North Ridge Estates Site, Klamath Falls, Oregon

FROM: Julie Wroble
Region 10 Toxicologist

TO: Dr. D. Wayne Berman
Aeolus Inc.

Dulcy Berri, RG
PBS Engineering and Environmental

Attached please find my initial comments on the Remedial Investigation /Feasibility Study Work Plan for the North Ridge Estates Site. In general, I think this document does not present as broad of a scope as what is needed to answer the questions at the site. Specifically, the proposed investigation does not appear to be focused on addressing sources of contamination at the site or defining nature and extent of contamination. These are explicit goals of the RI/FS process that appear to be minimized in the work plan. Given that the location of various types of asbestos contamination at the site are not well defined, these objectives must be addressed in the RI/FS.

Specific Comments:
Section 3.2, page 7: Lot owner names should not be included in documents that are being released to the public (see also Figure 2, Alan is this true?) Instead, a code could be used to identify parcels and the actual owner names would not be in the public record. EPA has made this comment on several occasions and the respondents have not addressed this concern. Are the seven vacant parcels currently owned by MBK? Please indicate if this is so. Also, in this section, please resolve the discrepancy between the number of children reported by ODHS and the US Census. This discrepancy may be related to the definition of "children" by age.

Section 3.3.4, page 13: This work plan refers to an indoor dust sampling report dated 2005. When will EPA receive this document? EPA would like to discuss the possibility of collecting additional dust samples indoors using more widely used methods – potentially to include the microvac.

Section 4.1.1, page 18: It has also been reported that OTI had dry cleaning training facilities at the site. The location of this facility should be confirmed.

Section 4.3, page 24: Although Berman's risk model does not differentiate among the various amphiboles, the type of asbestos present in the various samples may be important for understanding sources and distribution of contamination at the site. In every instance, detailed information on fiber characteristics should be provided.

In the third bullet in this section, the value of 3% amphibole is based on a relatively small amount of data. I computed percentages of amphibole ranging from 0 to 12% depending on sample type. Also, given the heterogeneity of contamination, the limited data may not be sufficient to make statements about overall percentages of amphibole versus chrysotile asbestos.

In the paragraph following the bullets, Dr. Berman states that amphibole asbestos drives risk considerations at the site; however, looking at Table 21 in the Soil Report (Sept. 2004), for several pathways, the chrysotile risks actually are higher. Given the uncertainties associated with asbestos risk assessment and the nature and extent of the various types of asbestos at the site, sampling should be more broadly focused, rather than limited to the extent of amphibole asbestos.

Section 5.2.1, page 30: Clarify that some limited sampling has been done for other COPCs. Recall that lead was screened using XRF in the field. Also, I believe some screening techniques were used for PCBs in the area of former transformers; however, detection limits may not have been adequate for risk assessment purposes.

Section 5.2.1.1, page 31: Although ambient concentrations of asbestos in air have been made, is additional quarterly monitoring warranted to help determine long-term chronic levels of asbestos in air. This may indicate seasonal variations in concentration.

Section 5.2.1.1, page 33: Additional details for how the activity-based sampling will be coupled with soil sampling and bench-scale testing should be provided in the sampling analysis plan. Or a teleconference with EPA should be scheduled to work through the details of this approach. EPA recommends consideration of dust sampling methods used at other asbestos sites so the results can be compared with other sites. I may argue that limited indoor sampling could be conducted this summer at residences where families have been relocated for the

summer. This provides an excellent opportunity for sampling while limiting the potential disruption to residents.

Section 5.2.1.3, page 37: I question the value of re-analyzing archived samples to determine current and future risks at the site, especially given the large volumes of ACM (and specifically mag insulation) that are re-emerging at the site. Some properties have very different levels of apparent contamination than what was perceived in 2003, as such, sampling should be done to best represent current and potential future exposures.

Section 5.2.1.4, page 38: What type of sampling is proposed to obtain information on contamination at depth? EPA is planning to use a geoprobe to investigate reported disposal areas.

Section 6.4.1.3, page 43: By "parcel-specific" do you mean the residential composite samples that EPA collected late in 2003? Perhaps given the recent emergence of mag insulation at several properties, current samples should be collected to answer this question. Also, as individual fibers are not visible, large clumps of friable mag insulation observable on the soil surface may have already resulted in release of amphibole fibers to other areas.

Section 6.7.2, page 45: Note that a resident could be exposed to asbestos via a variety of exposure pathways at the site. The baseline risk assessment should evaluate total exposure and total risk to residents so that remedies that are protective of health can be developed.

Section 6.7.2, page 46: Would an on-site met station be one tool to provide a site-specific input to the probabilistic risk assessment? Although EPA is not supportive of a probabilistic approach at the site for reasons discussed previously, we would want to review and comment on all inputs.